

Fuels and Fire Behavior Advisory

Great Basin – Northern Utah/Northeast Nevada above 4500

Valid July 21st – August 4th 2021



Subject: This Fuels and Fire Behavior Advisory covers northern Utah (north of I70) and northeast Nevada. Although the southern reaches of previous Fire and Fuels Behavior Advisory have seen a reprieve of hot and dry conditions with some monsoonal moisture, this is only a short-term impact on a long-term drought. Utah still has 98.7% of the state under extreme to exceptional drought conditions. Northern Utah is experiencing worsening conditions, not seen since the 1930's Dust Bowl Era, with dry fuel conditions resulting in increased fire behavior potential. Recent isolated precipitation has provided a short pause to fuel conditions, but significant weather changes will be required to impact the long-term drought.

Discussion: For nearly two decades, the Great Basin and Southwest have been in a long-term "megadrought" punctuated by a number of short and severe regional droughts. The following conditions are being experienced/observed:

- Live fuel moisture values (sagebrush, pinyon-juniper, Gambel's oak, mountain shrubs, aspen, and mixed conifer) peaked in May to early June and a number of wildfires have noted what appears to be lush vegetation exhibiting crown fires.
- Ancillary reports throughout the advisory area of drought induced impacts with potential to increase fire behavior, including additional spotting, with unusual juniper die-off, browning out of curl-leaf mountain mahogany and frost kill in Gambel's oak and snowbrush ceanothus.
- For numerous Predictive Service Areas, the Energy Release Component (ERCs) are at or above the 80th percentile with a number of locations at the 90th-95th percentile.
- 1000-hr time lag fuels are at historical lows and exhibiting complete consumption at all elevations.
- Fine fuels remain limited at lower elevations, due to minimal winter/spring precipitation.

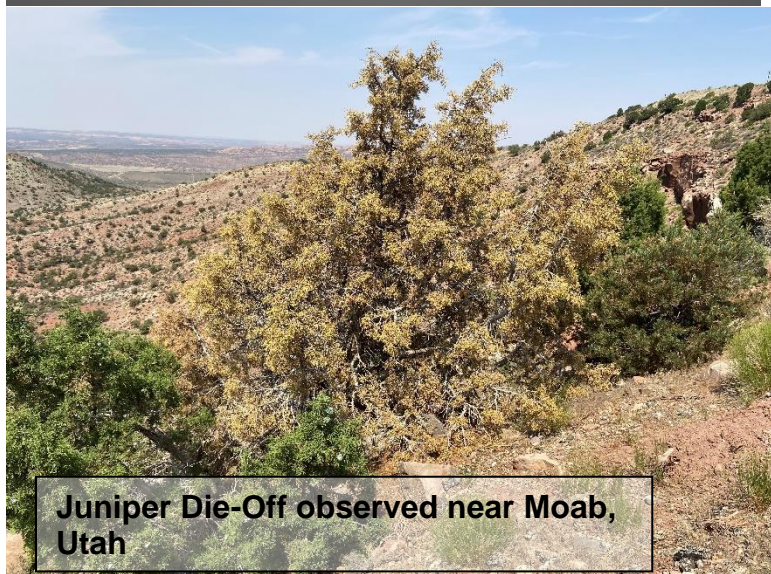
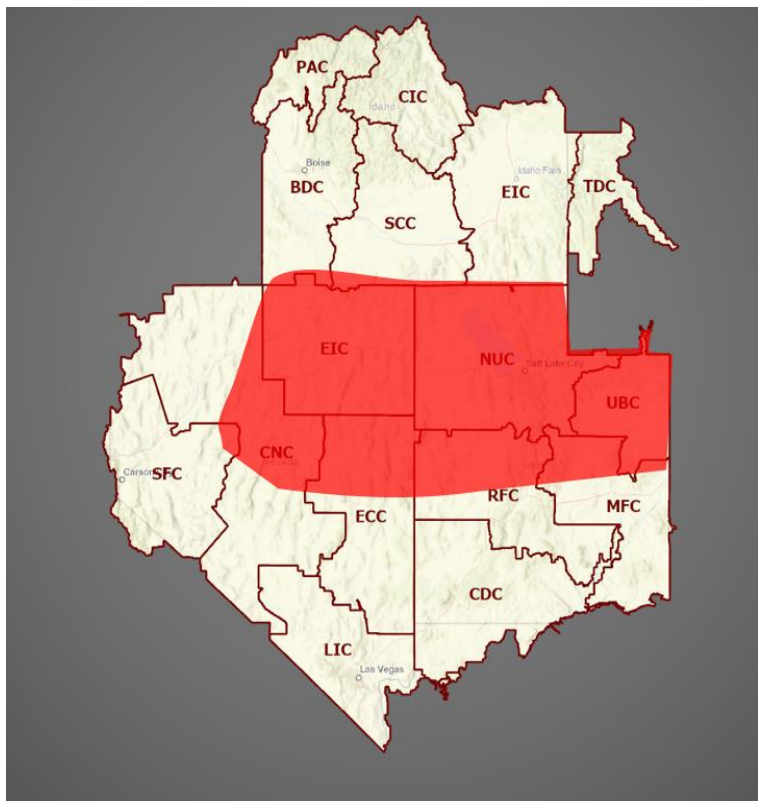
Concerns to Firefighters and the Public:

- Anticipate sagebrush, pinyon-juniper, Gambel's oak, mountain shrubs, and mixed conifer to ignite easily and exhibit advanced fire behavior, with potentially explosive fuels/terrain plume-driven fire behavior with profuse long-range spotting.
- With drought conditions and forecasted above normal temperatures and low relative humidities, anticipate fire activity picking up earlier in the day and extending into the evening.
- Short and mid-range spotting is possible with wind gusts, fire whirls, and frequent dust devils, creating spotting potential greater than ½ mile in all fuel types with a probability of ignition generally over 90% based on current weather.
- Under the right atmospheric conditions or favorable alignment of fuels and slope, expect potential development of large plume dominated fires.
- Fires more likely exceeding initial attack, unless significant allocation of aerial and ground resources are used.
- Some historic water sources may not be available for suppression purposes.

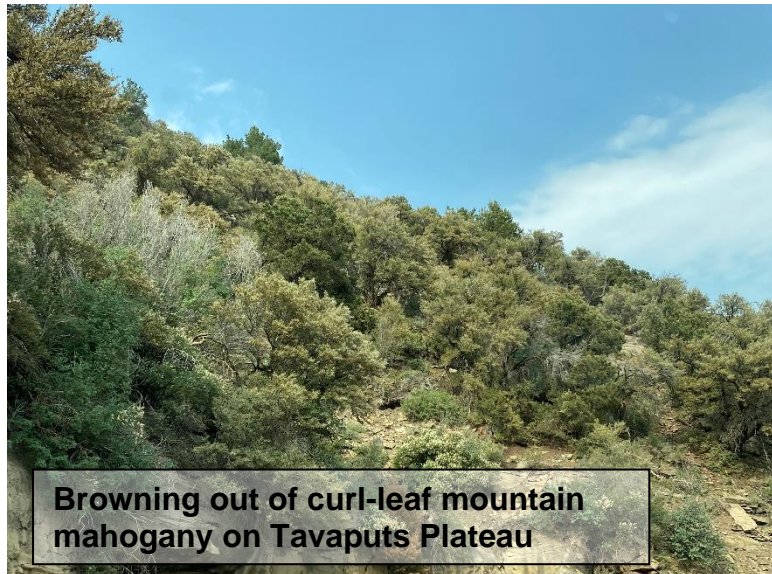
Mitigation Measures:

- Additional resources maybe required for successful initial attack.
- Direct attack may not be feasible in many circumstances and use of indirect attack measures may be necessary.
- Ensure you are planning well ahead of the fire.
- Expect long-range spotting of up to a ½ mile or more with well-developed columns.
- Retardant and bucket drops NOT effective unless followed up with ground resources.

Area of Concern: Utah north of Interstate 70 and northeast Nevada



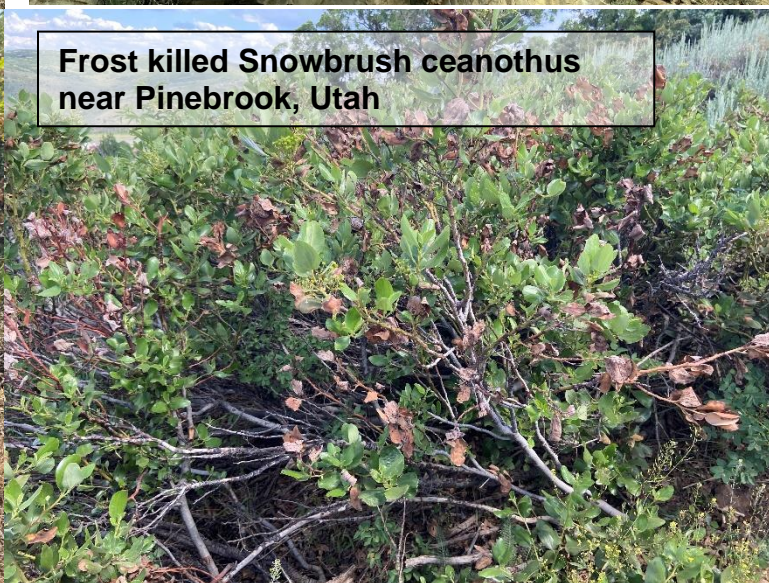
Juniper Die-Off observed near Moab, Utah



Browning out of curl-leaf mountain mahogany on Tavaputs Plateau



Frost killed Gambel's oak near Park City, Utah



Frost killed Snowbrush ceanothus near Pinebrook, Utah